

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-39 (Cancelled)

40. (Currently Amended) A method for making a virtual substrate, comprising: (1) bonding a device substrate to a handle substrate; (2) thinning the device substrate to form a device film on a front surface of the handle substrate, thus forming a virtual substrate; (3) forming a material on a back surface of the handle virtual substrate that possesses a coefficient of thermal expansion such that a CTE difference between the material and the handle substrate is of a same sign as a CTE difference between the device film and the handle substrate.

41. (Previously Presented) The method of claim 40, further comprising ion implanting a first side the device substrate prior to bonding the device substrate to the handle substrate.

42. (Previously Presented) The method of claim 41, wherein the step of thinning comprises thinning the device substrate by exfoliating a device film from the first side of the device substrate.

43. (Previously Presented) The method of claim 40, wherein the material is deposited on the back surface of the handle substrate prior to the formation of the virtual substrate.

44. (Previously Presented) The method of claim 40, wherein the material is deposited on the back surface of the handle substrate after the formation of the virtual substrate.

45. (Previously Presented) The method of claim 40, wherein the material comprises a strain compensation layer deposited on the back surface of the handle substrate.

46. (Previously Presented) The method of claim 45, wherein the device film comprises a semiconductor material suitable for fabrication of optoelectronic devices.

47. (Previously Presented) The method of claim 46, wherein the device film comprises germanium or a compound semiconductor material, the handle substrate comprises a silicon, glass, quartz or sapphire substrate, and the strain compensation layer comprises a semiconductor layer.

48. (Previously Presented) The method of claim 47, wherein the device film is selected from Ge, GaN, GaAs and InP films, the handle substrate comprises a silicon substrate and the strain compensation layer comprises a Ge layer.

49. (Previously Presented) The method of claim 45, wherein at least one of the strain compensation layer thickness, composition and deposition temperature is selected to minimize a bow of the virtual substrate over the given temperature range.

50. (Previously Presented) The method of claim 40, further comprising forming an optoelectronic device on the device film.

51. (New) The method of claim 45, wherein the material is selected such that at a first temperature a strain energy in the material and the device film is matched.